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Contemporary Arts Practice and Outer Space: A Multi-Disciplinary Approach (3)

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PILLOW TALK—CURATING DELIGHT FOR ASTRONAUTS

**Abstract**

In a not so distant future, human explorers will venture farther away from the Earth. To enable long-duration space missions, we need to advance space habitat designs beyond today's technological solutions, focusing on the astronauts' basic physiological and psychological needs. In addition, we must design for the crew's well-being and comfort, while reducing stress and enhancing their privacy. This goal can be addressed by designers and artists, who are skilled to lead facilitated conversations, create mockups, prototypes, and boundary objects, with curated affordances that respond to astronaut needs. One of the simplest examples of an artifact that provides comfort to a user is a pillow. At first glance, the meaning of a pillow in zero gravity is not obvious. Yet, exploring it deeper, the space environment also opens possibilities for experimentations and conversations around a reimagined space pillow artifact, with broadened affordances, while also supporting vitruvian delight. For example, stimulating the limbic brain through the sensory system—including touch, olfaction, hearing, vision, and taste—reduces stress. In this paper we discuss our design process, which includes our rationale to select this unlikely artifact as a representative boundary object. We discuss the ideation process on form and function, from head support to attachments to the habitat's wall. We explore the materiality and aesthetics of the outer skin layer, and curated interactivity options through soundscape, light, and smell. Our first-generation artifact acts as a proof of concept with a subset of all possible affordances. It is a forward looking search, in line with second-order cybernetics, where the outcomes inform us towards the development of subsequent space pillow versions. We use this boundary object to initiate a conversation about facilitated interactions between objects inside space habitats and the crew, and exemplify how artistic and designerly processes can contribute to space exploration. We also discuss the need to address higher-level astronaut needs on long-duration spaceflight, through an artifact that provides an emotional connection and bridge between the space travellers and their terrestrial home. During this process we also expect to broaden our concepts to other artifacts inside space habitats with user interactions and curated autonomy in support of discovery, learning, relaxation, comfort and well-being. By choosing a pillow as a focal point of this project, we are hoping to engage artists, designers, and space architects to reframe the discourse around space exploration, and to broaden today's technology-driven human space exploration paradigm.